

FRANKFORD ARSENAL, Building 211
South of Tacony Street between Bridge
Street and the tracks of the former
Pennsylvania Railroad
Philadelphia
Philadelphia County
Pennsylvania

HAER No. PA-74E

HAER
PA,
51-PHILA.
693-E-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
MID-ATLANTIC REGION, NATIONAL PARK SERVICE
DEPARTMENT OF THE INTERIOR
PHILADELPHIA, PENNSYLVANIA 19106

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Location: South of Tacony Street between Bridge Street and the tracks of the former Pennsylvania Railroad
Philadelphia, Philadelphia County, Pennsylvania

UTM: NW: E494120N4428480
NE: E494780 N4428750
SE: E495120 N4428260
SW: E494190 NEE28140
Quad: Frankford

Date of Construction: 1816-1976

Present Owner: Arsenal Associates
P.O. Box 26767
Elkins Park, PA 19117

Present Use: Vacant, industrial, offices

Significance: Established in 1816, the Frankford Arsenal served for three decades as a depot for the storage and repair of arms, accoutrements, and ammunition for the United States Army. From 1849 to 1976, the arsenal served as the nation's principal developer and manufacturer of small arms and artillery munitions. Frankford Arsenal pioneered mechanized production of munitions and developed numerous important innovations in ordnance and precision instruments. Technological innovations introduced at Frankford Arsenal made important contributions to the mechanization of American industry and the implementation of interchangeability and mass production techniques.

Project Information: This documentation was undertaken in August 1988 in accordance with the Memorandum of Agreement among the General Services Administration, the Pennsylvania State Historic Preservation Office, and the Advisory Council on Historic Preservation as a mitigative measure prior to the demolition of several buildings at Frankford Arsenal.

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Constructed in 1904 as a small arms ammunition storehouse, Building 211 is representative of the storage facilities constructed at Frankford Arsenal during the early twentieth century. The building incorporates the first use of a reinforced concrete structural system at the arsenal, a significant architectural and engineering advance largely masked by the conservative architectural treatment of the exterior.

Building 211 measures approximately 212 feet by 59 feet. It has a brownstone watertable atop concrete foundation walls, load-bearing brick exterior walls, and a reinforced concrete structural system. The hip roof is supported by steel Fink-type roof trusses and is clad with slate.

The building's structural system and floors represent the initial use of reinforced concrete construction at Frankford Arsenal. The contracting firm of Cramp & Company utilized the Kahn system of integrated precast beams and slab panels, although not in its fully developed form, in the construction of the building. Extensive loading tests were performed after the concrete was poured to determine the load limits of the structure. These tests indicated that the new structural system could support more than three times their designed limitations.

The exterior appearance of the building belies the innovative nature of its structure. The only exterior expression of the new construction material used in the building's structure are the concrete lintels and sills at the rectangular window openings. These are not, however, incorporated into the internal structural system, but are simply set into the exterior load-bearing brick walls. These walls are articulated by a corbeled brick cornice and by corbeled brickwork above the concrete lintels of the window openings. The window openings are fitted with multiple-light steel industrial sash.

The front [front] entry has a precast concrete frontispiece consisting of flanking pilasters with square capitals that support a full entablature with medallions and an ornamental keystone set within a segmental arch. A multiple-light segmentally-arched transom sash surmounts the glazed and paneled double entry doors. In keeping with its original function as a storehouse, the interior plan is largely open, with two rows of reinforced concrete columns.

Alterations to the original building include a concrete loading platform, with associated railroad spur, constructed at the south end of the building in 1910. The building was remodeled in 1919, as part of its conversion into a small arms tool shop. In 1923, an enclosed bridge was constructed, connecting the building to the adjacent Building 213. A second bridge connects to Building 210.

Building 211 originally served as the storehouse for all of the small arms ammunition manufactured at Frankford Arsenal. As such, it functioned as an integral part of the arsenal's supply and distribution system. After ca. 1919, the building housed the arsenal's small arms tool shop.

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BIBLIOGRAPHY

John Milner Associates, "Historical and Archeological Survey of Frankford Arsenal" (West Chester, PA: John Milner Associates, 1979).

Report prepared for the Department of the Army, Baltimore District, Corps of Engineers, Baltimore, Maryland. Copies on file at the Historical Society of Pennsylvania, the Free Library of Philadelphia, and the Philadelphia Historical Commission.

